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From: Kern, Gretchen <Gretchen.Kern@pxd.com>
Sent: Monday, September 29, 2014 11:04 AM
To: rulescoordinator
Subject: Comments on RRC's Proposed Amendments to Rules 3.9 and 3.46 (O&G Docket No.: 20-0290951)
Attachments: Pioneer Natural Resources Formal Comments re. RRC Proposed Amendments to Rules 3.9 and 3.46_9.29.14.pdf

Importance: High

Attached, please find comments by Pioneer Natural Resources on the TX RRC's *Proposed Amendments to 16 TAC § 3.9 Relating to Disposal Wells and § 3.46 Relating to Fluid Injection into Productive Reservoirs to Incorporate Requirements Related to Seismic Events, (TX Register August 29, 2014) O&G Docket No.: 20-0290951, during the formal public comment period.*

Please contact me via the information below should you have any questions or require additional information.

Thank you,

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PIONEER

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September 29, 2014

Rules Coordinator
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Railroad Commission of Texas
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Submitted electronically to: rules_coordinator@rrc.state.tx.us

Re: Comments of Pioneer Natural Resources on the TX Railroad Commission's Proposed Amendments to 16 Texas Administrative Code § 3.9 Relating to Disposal Wells and § 3.46 Relating to Fluid Injection into Productive Reservoirs to Incorporate Requirements Related to Seismic Events (TX Register August 29, 2014) O&G Docket No.: 20-0290951

Dear Rules Coordinator:

Pioneer Natural Resources USA, Inc. ("Pioneer") greatly appreciates the opportunity to provide input and submit comments on the Texas Railroad Commission's ("RRC") *Proposed Amendments to 16 Texas Administrative Code § 3.9 Relating to Disposal Wells and § 3.46 Relating to Fluid Injection into Productive Reservoirs to Incorporate Requirements Related to Seismic Events ("Proposed Amendments")*, published in the Texas Register on August 29, 2014, during the formal public comment period.

Pioneer is a large independent oil and gas exploration and production company, headquartered in Irving, Texas. The company employs nearly 4,000 people and produces approximately 183,000 barrels of oil equivalent per day. The company's assets include the Spraberry and Southern Wolfcamp trend areas, the Eagle Ford and Edwards trend areas, and the West Panhandle gas field located in Texas. Complementing these areas, Pioneer also has exploration, development, and oil and gas production activities in the Raton gas field located in southern Colorado.

Pioneer understands and appreciates the necessity of amendments to both § 3.9 and § 3.46 to address the potential link of disposal and/or injection activities to seismic events and associated perceived risks, as well as RRC's duty to act in the interest of public and respond to recent seismic activity in proximity to oil and gas operations. Pioneer commends the RRC's proactive approach and reasoned general requirements included in this rulemaking.

As an active member of the Texas Oil & Gas Association ("TXOGA"), Texas Independent Producers & Royalty Owners Association ("TIPRO"), Texas Alliance of Energy Producers (Alliance), and the Permian Basin Petroleum Association ("PBPA"), Pioneer contributed substantially to the efforts of these organizations' Seismicity Workgroup, formed to address this rulemaking. Therefore, Pioneer concurs with and fully supports these organizations' brief joint comments to the Proposed Amendments, submitted on September 26, 2014, which outline the provisions that the group supports as well its concerns and recommended revisions. Specifically, Pioneer would like to reiterate the primary concern discussed in the Seismicity Workgroups comments as well as briefly highlight other issues upon which Pioneer seeks language revisions and clarifications.

Pioneer agrees with the requirement to utilize the United States Geologic Service (USGS) database as the source for historical seismic activity as a permit condition for new disposal wells, however, as articulated in the Seismicity Workgroup's comments, the proposed research method raises concerns. While pressure front calculations can be an appropriate part of a robust technical review and risk assessment where there have been seismic events in close proximity to a proposed new disposal well, Pioneer, mirroring comments from the Seismicity Workgroup, questions utilizing 5 psi pressure front calculations as a tool simply to delineate an area for assessing historic seismic activity. The primary concern is that the number of variables that go into the calculation will not promote a common and consistent review of historic seismic events in a given area. Therefore, Pioneer and the Seismicity Workgroup recommend a more transparent and risk appropriate approach, namely, a review of USGS historic seismic activity data within a specific area surrounding a proposed disposal well location and pressure front calculations be moved to § 3.9(3)(C) and § 3.46(b)(1)(D) as part of the additional information that may be required by the RRC.

Further, Pioneer has the following specific concerns and recommendations:

- The disposal well permit applications referenced in both provisions § 3.9 (1)(B) and § 3.46 (b)(1)(C) require *"the results of a review of information from the United States Geological Survey (USGS) regarding the locations of any historical seismic events..."* In regard to magnitude, it is implied that the only seismic events that must be included in the permit applications referenced in these rules are those that exceed the USGS's threshold for recording. For clarity and as a safeguard for industry to demonstrate due diligence and compliance in the event of seismic events that may occur under the recordable threshold, Pioneer recommends that the threshold be included in the rule language as follows: *"the results of a review of information from the USGS regarding the locations of any historical seismic events that exceed the USGS recordable threshold of 2.5 magnitude on the Richter scale..."* Defining a numerical threshold would provide precise clarity in the rule and prevent the need to readdress this issue in the future as technology changes here or in other parts of the country (for example, although 2.5 is currently the threshold the USGS commonly uses nationally, California utilizes technology that can detect seismic event below this threshold). Further, 2.5 magnitude is a reasonable threshold as to

Rules Coordinator

Pioneer Natural Resources' Comments on RRC's Proposed Amendments to 16 TAC § 3.9 and § 3.46 to Incorporate Requirements Related to Seismic Events

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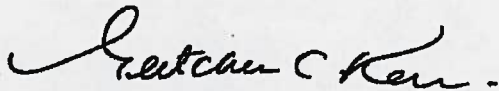
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what can be felt so seismic events below this threshold are minor and should be deemed negligible.

- In § 3.9 (6)(A), the Proposed Amendments state that *"A permit for saltwater or other oil and gas waste disposal may be modified, suspended, or terminated by the commission for just cause after notice and opportunity for hearing, if: (vi) injection is suspected of or shown to be causing seismic activity."* Similar language is used in § 3.46 (d)(1)(F) as well. Pioneer contends that use of the word "suspected" is too tenuous upon which to base a permit suspension or termination in particular. "Suspected" implies little or no proof and Pioneer reasons that some type of causal link should be validated in order to modify, suspend or terminate existing permits. Therefore, Pioneer recommends that *"suspected of"* be stricken and that injection must be shown or *"demonstrated"* based, for example, on data, proximity and the like.
- In § 3.9 (3)(C) and § 3.46 (b)(A)(D), the Proposed Amendments state that, *"The commission may require an applicant for a disposal well permit...to provide the commission with additional information such as logs, geologic cross-sections, and/or structure maps, to demonstrate that fluids will be confined if the well is to be located in an area where conditions exist that may increase the risk that fluids will not be confined to the injection interval."* Pioneer assumes and seeks confirmation from the RRC that the additional data requested will be existing logs, geologic cross-sections, and/or structure maps obtained at the onset of active disposal wells.
- Last, Pioneer would like for the RRC to confirm that in order to comply with the final rule amendments, industry is not responsible for purchasing and/or installing seismographs, geophones or other monitors designed to detect seismic activity.

Pioneer greatly appreciates the opportunity to submit these comments to the RRC on these Proposed Amendments to § 3.9 and § 3.46. Please contact me if you have any questions or require additional information.

Thank you,



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